CLAIMS:

1.   A communication network comprising a first
switching router and a second switching router,

5   first and second communication paths extending
between said first and second switching routers, said second
communication path including at least one communication path
element different from said first communication path,

        first enabling means for enabling said first
10   switching router to output predetermined data for
transmission to said second switching router onto said first
communication path with a flow label and a first
communication path label, and second enabling means for
enabling said first switching router to output said
predetermined data for transmission to said second switching
15   router onto said second communication path with said flow
label and a second communication path label,

        said second switching router having a flow label
and an instruction both corresponding to said flow label,
and, if said data is carried on said first communication
20   path, said second switching router being capable of matching
the flow label carried with said data with said
corresponding flow label, and, if said data is carried on
said second communication path, said second switching router
being capable of matching the flow label carried with said
25   data with said corresponding flow label.

2.   A communication network as claimed in claim 1,
wherein said first switching router comprises output means
for outputting data onto at least one of said first and
second communication paths.

3.   A communication network as claimed in claim 2,
wherein said first enabling means comprises an instruction
for enabling said output means to output data onto said
first communication path with said flow label and said first
5 communication path label.

4.   A communication network as claimed in claim 2,
wherein said second enabling means comprises an instruction
for enabling said output means to output data onto said
second communication path with said flow label and said
10 second communication path label.

5.   A communication network as claimed in claim 1,
further comprising labelling means for labelling data with a
communication path label.

6.   A communication network as claimed in claim 5,
15 wherein said first enabling means comprises an instruction
for enabling said labelling means to label with said first
communication path label data for transmission with said
flow label on said first communication path.

7.   A communication network as claimed in claim 5,
20 wherein said second enabling means comprises an instruction
for enabling said labelling means to label with said second
communication path label data for transmission with said
flow label on said second communication path.

8.   A communication network as claimed in claim 1,
25 wherein said first enabling means comprises a record of said
first communication path label.

9.   A communication network as claimed in claim 8,
wherein said first enabling means comprises an instruction

associating said first communication path label with said flow label.

10.   A communication network as claimed in claim 8, wherein said first switching router includes a memory
5 storing said first communication path label.

11.   A communication network as claimed in claim 1, wherein said second enabling means comprises a record of said second communication path label.

12.   A communication network as claimed in claim 11,
10 wherein said second enabling means comprises an instruction associating said second communication path label with said flow label.

13.   A communication network as claimed in claim 11, wherein said first switching router comprises a memory
15 storing said second communication path label.

14.   A communication network as claimed in claim 1, wherein said first enabling means comprises means for establishing a first label switched path between said first and second switching routers on said first communication
20 path, wherein said first communication path label comprises a first forwarding label of said first label switched path.

15.   A communication network as claimed in claim 1, wherein said second enabling means comprises means for establishing a second label switched path between said first
25 and second switching routers on said second communication path, and wherein said second communication path label comprises a first forwarding label of said second label switched path.

16.   A communication network as claimed in claim 1, wherein said first switching router includes output means responsive to said first enabling means to output a plurality of data for transmission to said second switching router onto said first communication path, each with a flow label from a plurality of different flow labels, and with a first communication path label, and said output means being responsive to said second enabling means to output a plurality of data for transmission to said second switching router onto said second communication path, each with a flow label from said plurality of different flow labels and said second communication path label.

17.   A communication network as claimed in claim 16, wherein said first enabling means comprises a record of said first communication path label.

18.   A communication network as claimed in claim 17, wherein said first enabling means comprises an instruction associating said first communication path label with each of said plurality of different flow labels.

19.   A communication network as claimed in claim 18, wherein said first switching router comprises a memory storing said instruction.

20.   A communication network as claimed in claim 16, wherein said second enabling means comprises a record of said second communication path label.

21.   A communication network as claimed in claim 20, wherein said second enabling means comprises an instruction associating said second communication path label with each of said plurality of different flow labels.

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22.   A communication network as claimed in claim 1,
wherein said first switching router comprises labelling
means for labelling data for transmission to said second
switching router with a communication path label, and
5   wherein said labelling means is further arranged to label
said data with said flow label.

23.   A communication network as claimed in claim 22,
wherein said first switching router includes receiving means
for receiving incoming data for transmission to said second
10 switching router, and wherein said labelling means is
arranged to select a flow label for transmission with data
to said second switching router.

24.   A communication network as claimed in claim 23,
wherein said first switching router includes reading means
15 for reading a label associated with incoming data for
transmission to said second switching router, and wherein
said labelling means is arranged to label said data with a
flow label selected in accordance with said incoming label.

25.   A communication network as claimed in claim 23,
20 wherein said labelling means is arranged to place the
selected one of said first and second communication path
labels in front of said flow label.

26.   A communication network as claimed in claim 1,
wherein at least one said first and second enabling means is
25 responsive to a state of at least one of said first and
second communication paths to enable said first switching
router to output data for transmission to said second
switching router onto at least one of said first and second
communication paths with said flow label and a respective
30 communication path label.

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27.   A communication network as claimed in claim 26, wherein said second enabling means is arranged to enable said first switching router to output data for transmission to said second switching router onto said second
5   communication path with said flow label and said second communication path label in response to said state.

28   A communication network as claimed in claim 27, wherein said state comprises a fault condition in the transmission capability of said first communication path.

10 29.   A communication network as claimed in claim 1, wherein said first switching router includes means for establishing said second communication path label for said second communication path.

30.   A communication network as claimed in claim 29,
15 wherein said first switching router is adapted to a establish said second communication path label either prior to the occurrence of a fault condition on said first communication path or in response to a fault condition on said first communication path.

20 31.   A communication network as claimed in claim 1, wherein said second switching router comprises a first instruction referencing said first communication path label to said stored flow label, and a second instruction for enabling said second switching router to reference data
25 containing said second communication path label with said first instruction.

32.   A communication network as claimed in claim 1, wherein said second switching router comprises a memory storing a plurality of different flow labels and a

forwarding instruction corresponding to each of said different flow labels, a first instruction enabling said second switching router to reference data containing said first communication path label with said plurality of

5 different flow labels, and a second instruction for enabling said second switching router to reference data containing said second communication path label with said plurality of different flow labels.

33.   A method of conditioning a communication network

10 for transmitting data from a first node to a second node of the network, in which the network includes first and second communication paths between said first and second nodes, the method comprising the steps of:

(a) establishing an instruction for execution at

15 the second node in respect of data which is to be transmitted from the first node to the second node, establishing a flow label corresponding to said instruction for transmission with said data from the first node to the second node, and storing said instruction and said

20 corresponding flow label at the second node,

(b) establishing a first communication path label for outputting with data from said first node onto said first communication path,

(c) establishing a second communication path label

25 for outputting with data from said first node onto said second communication path, and

(d) conditioning said first node to include said flow label with said data to be transmitted to the second node, and to include said first communication path label

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with said data if said data is to be transmitted along said first communication path, and to include said second communication path label with said data if said data is to be transmitted along said second communication path.

5   34.   A method as claimed in claim 33, wherein step (b) comprises establishing a first labelling system defining a first label switched path for transmitting data along said first communication path, and wherein said first communication path label comprises a forwarding label
10 defining said first label switched path.

35.   A method as claimed in claim 33, wherein step (c) comprises establishing a second labelling system defining a second label switched path for transmitting data along said second communication path, and wherein said second
15 communication path label comprises a forwarding label defining said second label switched path.

36.   A method as claimed in claim 34, wherein step (d) includes storing said forwarding label defining said first label switched path at said first node.

20 37.   A method as claimed in claim 36, wherein step (d) further comprises storing at said first node an instruction executable by said first node for including said first communication path label with data to be output with said flow label onto said first communication path.

25 38.   A method as claimed in claim 35, wherein step (d) includes storing said forwarding label defining said second label switched path at said first node.

39.   A method as claimed in claim 38, wherein step (d) further comprises storing at said first node an instruction

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executable by said first node for including said second
communication path label with data to be output with said
flow label onto said second communication path.

40.   A method as claimed in claim 33, wherein the step
5   of establishing a flow label further comprises storing said
flow label at said first node.

41.   A method as claimed in claim 33, further
comprising the step of conditioning said first node to
include a respective communication path label with data for
10   transmission to said second node, such that said
communication path label precedes said flow label in the
direction of data flow.

42.   A method as claimed in claim 33, further
comprising conditioning said second node to read said flow
15   label carried with said data and to execute said
corresponding instruction if said data is transmitted on
said second communication path.

43.   A method as claimed in claim 42, further
comprising conditioning said second node to match said flow
20   label carried with said data with said stored flow label and
to execute said corresponding instruction in response
thereto.

44.   A method as claimed in claim 42, further
comprising conditioning said second node to read said second
25   communication path label carried with said data and to match
said flow label carried with said data with said stored flow
label.

45.   A method as claimed in claim 42, wherein the step
of conditioning the second node further comprises storing an

instruction at said second node referencing a second communication path label to said flow label.

46.   A method as claimed in claim 45, further comprising transmitting a signal to the second node to cause the second node to generate said instruction.

47.   A method as claimed in claim 45, wherein said second communication path label comprises a forwarding label defining a label switched path on said second communication path.

48.   A method as claimed in claim 33, further comprising conditioning said second node to read said flow label carried with said data and to execute said corresponding instruction if said data is transmitted on said first communication path.

49.   A method as claimed in claim 34, wherein step (c) comprises establishing a second labelling system defining a second label switched for transmitting data along said second communication path, and wherein said second communication path label comprises a forwarding label defining said second label switched path.

50.   A method as claimed in claim 49, further comprising the step of conditioning the second node to read said flow label and to execute said corresponding instruction whether said data is transmitted on said first or said second communication path.

51.   A method as claimed in claim 50, wherein the step of conditioning the second node comprises storing a first instruction referencing a forwarding label defining said first label switched path to said flow label and said

corresponding instruction, and storing a second instruction referencing a forwarding label defining said second label switched path to said flow label and said corresponding instruction.

5   52.   A method as claimed in claim 51, further comprising transmitting a signal to the second node to cause said second node to generate said second instruction.

53.   A method as claimed in claim 50, wherein the step of conditioning said second node comprises the steps of
10 storing a first instruction at said second node referencing a forwarding label defining said first label switched path to said flow label and said corresponding instruction, and enabling said second node to refer to said first instruction in response to receiving data labelled with a forwarding
15 label defining said second label switched path.

54.   A method as claimed in claim 53, wherein the step of enabling said second node comprises transmitting a signal to said second node.

55.   A method as claimed in claim 33, wherein the step
20 of conditioning the first node comprises storing a first forwarding instruction at said first node, said first forwarding instruction comprising said first communication path label and said flow label, storing a second forwarding instruction at said first node comprising said second
25 communication path label and said flow label, monitoring a state of data transmission associated with said flow label and changing at least one of said first and said second forwarding instruction in response to a change in said state.

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56.   A method as claimed in claim 55, wherein said first communication path label comprises a forwarding label defining a first label switched path on said first communication path and said second communication path label

5   comprises a forwarding label defining a second label switched path on said second communication path.

57.   A method as claimed 33, further comprising conditioning said second node to read said flow label carried with said data and to execute said corresponding

10   instruction whether said data is transmitted on said first or said second communication path, including storing a first instruction at said second node including a first communication path label, said flow label and said corresponding instruction, storing a second instruction at

15   said second node comprising a second communication path label, said flow label and said corresponding instruction, monitoring a state of transmission associated with said flow label, and changing said first and second instruction in response to a change in said state.

20   58.   A method as claimed in claim 33, wherein step (a) comprises establishing a plurality of different flow labels to be transmitted with data from said first to said second node, and storing said flow labels and an instruction corresponding to each flow label at said second node, and

25   wherein step (d) comprises conditioning the first node to include with each of said plurality of data to be transmitted from the first node to the second node a flow label established for each data, and to include with each of said plurality of data a first communication path label if

30   said data is to be transmitted along said first

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communication path, and to include with said data a second communication path label if said data is to be transmitted along said second communication path.

59.   A method as claimed in claim 58, wherein said
5   first communication path label comprises a forwarding label defining a first label switched path on said first communication path, and said second communication path label comprises a forwarding label defining a second labelled switched path on said second communication path.

10   60.   A method as claimed in claim 58, further comprising the step of conditioning said second node to read each of said flow labels whether the data containing said flow labels is received on said first or said second communication path.

15   61.   A method as claimed in claim 59, further comprising storing a reference at said first node associating said second label switched path with said first label switched path.

62.   A method as claimed in claim 61, wherein the step
20   of conditioning said first node comprises generating a first table of forwarding instructions which enables said first node to transmit data on said first label switched path, and generating a second table of forwarding instructions which enables said first node to forward data on said second label
25   switched path.

63.   A method as claimed in claim 62, further comprising arranging the forwarding instructions of said second table to include the same flow labels as those contained in said first table.

64.   A method as claimed in claim 63, comprising
monitoring a state of data transmission associated with each
flow label and changing a forwarding instruction associated
with a flow label in response to a change in said state.

5   65.   A method as claimed in claim 64, wherein the step
of conditioning the second node comprises storing a
reference at said second node associating a first
communication path label with a second communication path
label.

10 66.   A method as claimed in claim 65, wherein said
first communication path label comprises a forwarding label
defining a first label switched path between said first node
and said second node on said first communication path and
said second communication path label comprises a forwarding
15 label defining a second label switched path between said
first and second nodes on said second communication path.

67.   A method as claimed in claim 60, wherein the step
of conditioning the second node comprises generating a first
table containing a plurality of instructions, each
20 comprising a different flow label and an associated
instruction and conditioning said second node to reference
data carrying a first communication path label to said first
table, and generating a second table containing each
different flow label and an associated instruction, and
25 conditioning said second node to reference data containing
said second communication path label to said second table.

68.   A method as claimed in claim 67, further
comprising monitoring a state of data transmission
associated with each flow label and changing an instruction

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in each of said first and second tables stored at said second node in response to a change in said state.

69.   A method as claimed in claim 33, further comprising conditioning said first node to route data over 5   one of said first and second label switched paths in response to a switching signal.

70.   A method as claimed in claim 33, further comprising conditioning said first node to switch the transmission of data from one of said first and second 10   communication paths to the other communication path in response to a state of at least one of said first and second communication paths.

71.   A method as claimed in claim 33, wherein said first node is conditioned to switch data transmission from 15   said first communication path to said second communication path in response at least one of a fault or failure in the transmission capability of said first communication path and the density of data transmitted on said first communication path.

20   72.   A method as claimed in claim 33, wherein said first node is conditioned to switch the transmission of data from said second communication path to said first communication path in response to at least one of the restoration of the transmission capability of said first 25   communication path and the density of data transmitted on one of said first and second communication paths.

73.   A method as claimed in claim 33, further comprising conditioning said first node to duplicate said data and to output said data onto said first and second

communication paths with said flow label and a respective communication path label.

74.   A method as claimed in claim 73, further comprising conditioning said second node to select from said
5   first and second communication paths data in respect of which to read said flow label.

75.   A method of transmitting data from a first node to a second node on a communication network which includes first and second communication paths between said first and
10 second nodes, the method comprising the steps of:

              (a) labelling data for transmission to said second node with a flow label for enabling said second node to execute an instruction associated therewith,

              (b) labelling said data with a first communication
15 path label for transmitting data along said first communication path,

              (c) outputting from said first node data onto said first communication path with said flow label and said first communication path label,

20   (d) in response to a signal, labelling data for transmission to said second node with a flow label for enabling said second node to execute said instruction,

              (e) labelling said data with a second communication path label for transmitting data along said
25 second communication path,

(f) outputting data onto said second communication path with said flow label included with data in step (d), and said second communication path label.

76.   A method as claimed in claim 75, wherein said first communication path label comprises a label defining a first label switched path for transmitting data along said first communication path.

77.   A method as claimed in claim 75, wherein said second communication path label comprises a label defining a second label switched for transmitting data along said second communication path.

78.   A method as claimed in claim 75, wherein the flow label included with said data in step (d) is the same label included with said data in step (a).

79.   A method as claimed in claim 77, wherein the step of labelling data with a label defining said second label switched path comprises establishing a labelling system defining said second label switched path and referencing a forwarding label defining said second label switched path to the flow label included with said data in step (a).

80.   A method as claimed in claim 75, comprising, in step (a), labelling each of a plurality of data for transmission to said second node with a different flow label selected from a plurality of different flow labels for enabling said second node to execute an instruction associated with each different flow label, in step (b), labelling each of said plurality of data with said first communication path label, in step (c), outputting each of said plurality of data onto said first communication path

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with a flow label added in step (a) and said first
communication path label, in response to a signal, labelling
each of a plurality of data for transmission to said second
node with a respective different flow label from said

5 plurality of different flow labels for enabling said second
node to execute an instruction associated with each
different flow label, labelling each of said plurality of
data with said second communication path label, and
outputting each of said plurality of data onto said second

10 communication path with a flow label and said second
communication path label.

81.   A method as claimed in claim 80, wherein said
first communication path label comprises a label defining a
first label switched path for transmitting data along said

15 first communication path.

82.   A method as claimed in claim 80, wherein said
second communication path label comprises a label defining a
second label switched path for transmitting data along said
second communication path.

20 83.   A method as claimed in claim 82, wherein the step
of labelling each of said plurality of data with a label
defining said second label switched path comprises
establishing said second label switched path and referencing
said label defining said second label switched path to each

25 of said plurality of different flow labels.

84.   A method as claimed in claim 80, wherein said
first node includes a first table of forwarding instructions
for enabling said first node to transmit data onto said
first communication path and a second table of forwarding

30 instructions to enable said first node to transmit data onto

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said second communication path, wherein each table contains said plurality of different flow labels, and wherein labelling said data for transmission on said second communication path comprises using said second table of
5 forwarding instructions.

85.   A method as claimed in claim 75, further comprising receiving said data at said second node and reading said flow label received with said data whether the data is received from said first communication path or said
10 second communication path.

86.   A router for routing data onto a network having a network node and first and second communication paths extending from said router to said network node, said router comprising first enabling means for enabling said router to
15 route data for transmission to said network node onto said first communication path with a flow label to enable said network node to perform a forwarding operation on said data, and with a first communication path label,

       and second enabling means for enabling said router
20 to route data for transmission to said network node onto said second communication path with a flow label to enable said network node to perform said operation on said data, and with a second communication path label.

87.   A router as claimed in claim 86, further
25 comprising data selecting means selecting data to be transmitted to said network node, and labelling means responsive to said first and second enabling means for labelling data to be transmitted to said network node with said flow label.

88.   A router as claimed in claim 86, further including output means responsive to said first enabling means to output a plurality of data for transmission to said network node onto to said first communication path, each with a flow

5   label from a plurality of different flow labels, and with a first communication path label, and said output means being responsive to said second enabling means to output a plurality of data for transmission to said network node onto said second communication path, each with a flow label from

10 said plurality of different flow labels, and with said second communication path label.

89.   A router as claimed in claim 88, having a memory storing said plurality of different flow labels, and wherein said first enabling means comprises an instruction

15 referencing each of said different flow labels to said first communication path label.

90.   A router as claimed in claim 88, comprising a memory storing said plurality of different flow labels, and wherein said second enabling means comprises an instruction

20 referencing each of said different flow labels to said second communication path label.

91.   A router as claimed in claim 86, further comprising signalling means for transmitting a signal for said network node, indicating that said second communication

25 path serves as an alternative path for said first communication path.

92.   A router as claimed in claim 86, wherein at least one of said first and second enabling means is responsive to a state of at least one of said first and second

30 communication paths to enable said router to output data for

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transmission to said network node onto at least one of said first and second communication paths with said flow label and a respective communication path label.

93.   A router as claimed in claim 92, wherein said
5   second enabling means is operative to enable said router to output data for transmission to said network node onto said second communication path with said flow label and said second communication path label in response to said state.

94.   A router as claimed in claim 93, wherein said
10   state comprises at least one of a fault condition in the transmission capability of said first communication path and the density of data for transmission on said first communication path.

95.   A router for receiving data from a first and
15   second communication path, comprising:

        reading means for reading a communication path label and a flow label received with data from said first and second communication paths,

        a memory storing a flow label and a corresponding
20   forwarding instruction to enable said router to forward data having said stored flow label, and

        comparing means for comparing a flow label received with data on said first or second communication path with said stored flow label if said data and said
25   received flow label is received with one of said first and second communication path labels.

96.   A router as claimed in claim 95, including a first instruction for causing said router to reference data

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containing said first communication path label with said stored flow label and a second instruction for causing said router to reference data containing said second communication path label with said stored flow label.

5   97.   A router as claimed in claim 96, further comprising generating means for generating at least one of said first and second instructions in response to a signal.

98.   A router as claimed in claim 95, wherein said memory stores a plurality of different flow labels and a
10 forwarding instruction associated with each of said different flow labels, and wherein said comparing means is arranged to compare a flow label received with data with at least one of said stored flow labels if said data and flow label is received with one of said first and second
15 communication path labels.

99.   A router as claimed in claim 98, further comprising an instruction referencing said first communication path label with each of said stored flow labels.

20 100.   A router as claimed in claim 98, further comprising an instruction referencing said second communication path label to each of said stored flow labels.

101.   A router as claimed in claim 98, further comprising an instruction referencing said second
25 communication path label with said first communication path label.

102.   A communication network comprising a first switching router and a second switching router,

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first and second communication paths extending
between said first and second switching routers, said second
communication path including at least one communication
element different from said first communication path,

5   first enabling means for enabling said first
switching router to output predetermined data for
transmission to said second switching router onto said first
communication path,

labelling means for labelling said predetermined
10 data with a flow label, specified for said predetermined
data and which is received by said second switching router
from said first communication path with said predetermined
data, if said data is carried on said first communication
path,

15   and second enabling means for enabling said first
switching router to output said predetermined data for
transmission to said second switching router onto said
second communication path with a flow label related to said
specified flow label and with a second communication path
20 label.

103.   A communication network as claimed in claim 102,
wherein said second switching router has an instruction for
said predetermined data and, if said predetermined data is
carried on said first communication path, said second
25 switching router being capable of matching said
predetermined data to said instruction in response to
receiving said specified flow label, and if said
predetermined data is carried on said second communication
path, said second switching router being capable of matching

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said predetermined data to said instruction in response to
receiving said related flow label.

104.   A communication network as claimed in claim 102,
wherein said related flow label is the same as said
5 specified flow label.

105.   A communication network as claimed in claim 102,
wherein said first enabling means is adapted to enable said
first switching router to output said predetermined data
onto said first communication path with a flow label related
10 to said specified flow label.

106.   A communication network as claimed in claim 105,
wherein said first communication path includes a label
switched path, and wherein said specified flow label and
said related label are forwarding labels defining said first
15 label switched path.

107.   A communication network as claimed in claim 102,
comprising a label switched path on said second
communication path, and wherein said second communication
path label comprises a forwarding label defining said label
20 switched path.

108.   A communication network comprising a first
switching router and a second switching router, a plurality
of communication paths extending between said first and
second switching routers including at least a first
25 communication path and a second communication path,

        first enabling means for enabling said first
switching router to output a plurality of predetermined data
for transmission to said second switching router onto at
least one of said communication paths,

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labelling means for labelling each of said
plurality of data with a flow label specified for each data
from a plurality of predetermined different flow labels each
to be received by said second switching router with
5 respective data if said data is carried on said at least one
of said communication paths, and

second enabling means for enabling said first
switching router to output a plurality of said predetermined
data for transmission to said second switching router onto
10 one of said first and second communication paths and to
output with each predetermined data a flow label specified
for the respective data and relating to one of said
plurality of different flow labels, and with a second
communication path label.

15 109.   A communication network as claimed in claim 108,
wherein said second switching router includes an instruction
associated with each of said plurality of specified flow
labels, and, if data is received with a second communication
path label related to the second communication path label
20 output by said first switching router, said second switching
router being responsive to each said related flow label to
match each data to an instruction associated with a
specified flow label to which said related flow label
relates.

25 110.   A communication network comprising a first
switching router and a second switching router,

first and second communication paths extending
between said first and second switching routers,

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a first enabler for enabling said first switching router to output predetermined data for transmission to said second switching router onto said first communication path with a first flow label and a first communication path label

5   and a second enabler for enabling said first switching to output said predetermined data for transmission to said second switching router onto said second communication path with a second flow label and a second communication path label, said second switching router having an instruction

10   for said predetermined data, and, if said data is carried on said first communication path, said second switching router being responsive to said first flow label to associate said predetermined data with said instruction, and, if said data is carried on said second communication path, said second

15   switching router being responsive to said second flow label to associate said pre-determined data with said instruction.

111.   A communication network as claimed in claim 110, wherein said first flow label is the same as said second flow label.

20   112.   A communication network as claimed in claim 110, wherein said second flow label is different from said first flow label.

113.   A communication network as claimed in claim 110, wherein said second switching router includes an instruction

25   relating said second flow label to said first flow label.

114.   A method of conditioning a communication network for transmitting data from a first node to a second node of the network, in which the network includes first and second communication paths between said first and second nodes, the

30   method comprising the steps of:

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(a) establishing an instruction for execution at the second node in respect of predetermined data which is to be transmitted from the first node to the second node, establishing one or more flow labels corresponding to said
5 instruction for transmission with said data from the first node to the second node, and storing said instruction at said second node,

(b) establishing a first communication path label for outputting with data from said first node onto said
10 first communication path,

(c) establishing a second communication path label for outputting with data from said first node onto said second communication path, and

(d) conditioning said first node to include a flow
15 label associated with said instruction with said predetermined data to be transmitted to said second node, and to include said first communication path label with said predetermined data if said data is to be transmitted along said first communication path, and to include said second
20 communication path label with said predetermined data, if said data is to be transmitted along said second communication path.

115. A method as claimed in claim 114, wherein step (a) comprises establishing a first and second flow label
25 associated with said instruction and, step (d) comprises conditioning said first node to include said first flow label with said predetermined data if said data is to be transmitted along said first communication path, and to include said second flow label with said predetermined data

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if said data is to be transmitted along said second
communication path.

116.   A method as claimed in claim 115, wherein said
first and second flow labels are the same.

5   117.   A method as claimed in claim 115, wherein said
first and second flow labels are different.

118.   A router for receiving data from a first and
second communication path, comprising:

reading means for reading a communication path
10 label and a flow label received with data from said first
and second communication paths,

a memory storing a forwarding instruction to
enable said router to forward data having a predetermined
flow label and means responsive to a flow label associated
15 with said predetermined flow label received with data on
said first or second communication path to associate data
with said instruction, if said data and said associated flow
label is received with one of said first and second
communication path labels.

20 119.   A method of conditioning a communication network
for transmitting data from a first node to a second node, in
which the network has first and second communication paths
between said first and second nodes,

said network having a first label switched path
25 for transmitting data along said first communication path
from said first node to said second node,

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　　　　and first enabling means for enabling said first
node to transmit predetermined data on said first label
switched path and to transmit with said predetermined data a
flow label, to enable said second node to perform a
5 forwarding operation on said data, and with a forwarding
label defining said first label switched path, the method
comprising the steps of:

　　　　(a) establishing a second label switched path for
transmitting said predetermined data along said second
10 communication path,

　　　　(b) conditioning said first node for labelling
said predetermined data with a label defining said second
label switched path for transmitting data along said second
communication path, and

15 　　　　(c) conditioning said first node for outputting
said predetermined data onto said second communication path
with a flow label to enable said second node to perform said
forwarding operation on said predetermined data, and with
said label defining said second label switched path.

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